

WHAT IS CLAIMED IS:

1. A process for the passive removal of a contaminant from a gas comprising water and the contaminant in an enclosed space, said process comprising contacting the gas with a uniform adsorbent sheet comprising a weak adsorbent to maintain effective
5 gas quality within the enclosed space.
2. The process of claim 1 wherein the weak adsorbent is selected from the group consisting of silica gel, molecular sieves, activated aluminas, activated carbon and combinations thereof.
3. The process of claim 1 wherein the weak adsorbent comprises a high silica
10 zeolite.
4. The process of claim 1 wherein the weak adsorbent is selected from the group consisting of clinoptilolite, boggsite, EMC-2, zeolite L, ZSM-5, ZSM-11, ZSM-18, ZSM-57, EU-1, offretite, faujasite, ferrierite, mordenite, zeolite Beta, and silicalite
5. The process of claim 1 wherein the weak adsorbent has a silica to alumina ratio greater than 10:1.
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6. The process of claim 1 wherein the weak adsorbent comprises silicalite.
7. The process of claim 1 wherein the effective gas quality within the enclosed space includes a relative humidity between about 30 and about 70 percent.

8. The process of claim 1 wherein between about 50 to about 90 weight percent of the organic contaminants are removed from the gas.

9. The process of claim 1 wherein the enclosed space is defined by a housing surrounding a disk drive.

5 10. The process of claim 1 wherein the uniform adsorbent sheet has an asymmetric structure.

11. The process of claim 1 wherein the uniform adsorbent sheet is disposed in multiple layers.

12. The process of claim 1 wherein the uniform adsorbent sheet comprises a 10 hydrophobic polymer binder.

13. The process of claim 1 wherein the uniform adsorbent sheet comprises a hydrophobic polymer binder and a hydrophilic adsorbent.

14. The process of claim 13 wherein the hydrophobic polymer binder comprises polysulfone and the hydrophilic adsorbent comprises 13X zeolite.

15 15. The process of claim 13 wherein the adsorbent material comprises a first layer consisting of a hydrophobic polymer and a hydrophilic adsorbent and at least one other layer consisting of a hydrophobic polymer and a hydrophilic or a hydrophobic adsorbent.

16. The process of claim 1 wherein the contaminant is selected from the group 20 consisting of chlorine, hydrogen sulfide, nitrous oxide, mineral acids, silicone vapors, alcohols, ketones, hydrocarbons, and mixtures thereof.

17. The process of claim 1 wherein the contaminant comprises benzothiozole.

18. The process of claim 1 wherein the uniform adsorbent sheet is disposed as a filter media.

19. A disk drive using a passive humidity control and contaminant removal system according to the process of claim 1.

20. A process for the passive regulation of water and a contaminant from a gas comprising water and the organic contaminants in an enclosed space, said process comprising contacting the gas with an adsorbent sheet having an asymmetric structure containing a weak adsorbent to provide a relative humidity ranging from about 30 to about 70 percent over a temperature within the enclosed space ranging from about 20° to about 50°C and to remove about 55 to about 90 percent of the contaminant.